

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 04/03/07

Date Received: 03/20/07

Project: Boiler H2O, PO# M00053, F&BI 703172

Date Analyzed: 03/21/07

**RESULTS FROM THE ANALYSIS OF WATER SAMPLES
FOR pH
USING EPA METHOD 9040C**

Sample ID

Laboratory ID

pH

M00053

703172-01

6.66

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 04/03/07

Date Received: 03/20/07

Project: Boiler H2O, PO# M00053, F&BI 703172

**QUALITY ASSURANCE RESULTS
FROM THE ANALYSIS OF WATER SAMPLES
FOR pH BY METHOD 9040C**

Laboratory Code: 703172-01 (Duplicate)

Analyte	Sample Result	Duplicate Result	Relative Percent Difference	Acceptance Criteria
pH	6.66	6.70	0	0-20

SAMPLE CHAIN OF CUSTODY

5.22 1a-No

K525

Page # 1 of 1

Send Report To Michael Erdahl

Company Friedman and Bruya, Inc.

Address 3012 16th Ave W

City, State, ZIP Seattle, WA 98119

Phone # (206) 285-8282 Fax # (206) 283-5044

SAMPLERS (signature)

PROJECT NAME/NO.

703172

PO #

14.805

REMARKS

Please Fax Results

TURNAROUND TIME

☒ Standard (2 Weeks)

☐ RUSH

Rush charges authorized by:

SAMPLE DISPOSAL

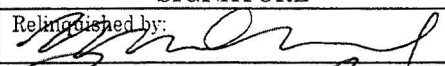
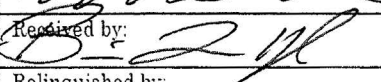
☐ Dispose after 30 days

☐ Return samples

☐ Will call with instructions

						ANALYSES REQUESTED												
Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of containers	O&G w/o SG	O&G w/sg	Total Hg	Dissolved Hg	EPH	VPH	Nitrate	Sulfate	Alkalinity	Conductivity	Phosphate	Notes	
M00053		3/20/07	11:00	W	1									/	/	/		

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282
Fax (206) 283-5044

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: 	Michael Erdahl	Friedman & Bruya	3/20/07	3:00 PM
Received by: 	BRIAN Keger	AKI	3/21/07	1305
Relinquished by:				
Received by:				



Analytical Resources, Incorporated
Analytical Chemists and Consultants

RECEIVED
APR 04 2007

March 27, 2007

Mike Erdahl
Friedman & Bruya
3012 - 16th Avenue West
Seattle, WA 9819-2029

Project: 703172 PO# H-805
ARI Job: KS25

Dear Mike:

Please find enclosed the original chain of custody record and analytical results for the samples from the project referenced above. Analytical Resources, Inc. accepted one water sample in good condition on March 21, 2007.

The sample was analyzed for Conductivity (by EPA Method 120.1) and Total Phosphorus (by EPA Method 365.2), as requested on the *Chain of Custody*. Alkalinity was also requested by Friedman and Bruya, but was unable to be performed due to insufficient volume.

The analyses proceeded free of irregularities.

Quality control analysis results are included for your review. Copies of the reports and all associated raw data will be kept on file electronically at ARI. If you have any questions or require additional information, please contact me at your convenience.

Sincerely,
ANALYTICAL RESOURCES, INC.

Eric Branson
Junior Project Manager
(206) 695-6213
eric@arilabs.com
www.arilabs.com

Enclosures



Analytical Resources, Incorporated
Analytical Chemists and Consultants

Cooler Receipt Form

ARI Client: FBI
COC No: _____
Assigned ARI Job No: K525

Project Name: 703172
Delivered by: Courier
Tracking No: _____

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of to cooler? YES ☐ NO ☒
Were custody papers included with the cooler? ☒ YES ☐ NO
Were custody papers properly filled out (ink, signed, etc.) ☒ YES ☐ NO
Record cooler temperature (recommended 2.0-6.0 °C for chemistry) 5.2 °C
Cooler Accepted by: B. D. gl Date: 3/21/07 Time: 1305

Complete custody forms and attach all shipping documents

Log-In Phase:

Was a temperature blank included in the cooler? YES ☐ NO ☒
What kind of packing material was used? BW
Was sufficient ice used (if appropriate)? YES ☐ NO ☒
Were all bottles sealed in individual plastic bags? YES ☐ NO ☒
Did all bottle arrive in good condition (unbroken)? ☒ YES ☐ NO
Were all bottle labels complete and legible? YES ☐ NO ☒
Did all bottle labels and tags agree with custody papers? ☒ YES ☐ NO
Were all bottles used correct for the requested analyses? ☒ YES ☐ NO
Do any of the analyses (bottles) require preservation? (attach preservation checklist) ☒ YES ☐ NO
Were all VOC vials free of air bubbles? ☒ NA YES ☐ NO
Was sufficient amount of sample sent in each bottle? YES ☐ NO ☒ *
Samples Logged by: NA Date: 3/21/07 Time: 1345

**** Notify Project Manager of discrepancies or concerns ****

Explain discrepancies or negative responses:

* Limited Volume!


* Bottle ID has no date or time sampled

By: NA

Date: 3/21/07

SAMPLE RESULTS-CONVENTIONALS
KS25-Friedman & Bruya, Inc.



Matrix: Water
Data Release Authorized: 
Reported: 03/27/07

Project: PO# H-805
Event: 703172
Date Sampled: 03/20/07
Date Received: 03/21/07

Client ID: M00053
ARI ID: 07-4863 KS25A

Analyte	Date Batch	Method	Units	RL	Sample
Conductivity	03/22/07 032207#1	EPA 120.1	umhos/cm	1.00	287
Total Phosphorus	03/23/07 032307#1	EPA 365.2	mg-P/L	3.20	96.8

RL Analytical reporting limit
U Undetected at reported detection limit

Water Sample Report-KS25

REPLICATE RESULTS-CONVENTIONALS
KS25-Friedman & Bruya, Inc.



Matrix: Water
Data Release Authorized: *[Signature]*
Reported: 03/27/07


Project: PO# H-805
Event: 703172
Date Sampled: 03/20/07
Date Received: 03/21/07

Analyte	Method	Date	Units	Sample	Replicate(s)	RPD/RSD
ARI ID: KS25A Client ID: M00053						
Conductivity	EPA 120.1	03/22/07	umhos/cm	287	288	0.3%

Water Replicate Report-KS25

METHOD BLANK RESULTS-CONVENTIONALS
KS25-Friedman & Bruya, Inc.



Matrix: Water
Data Release Authorized: 
Reported: 03/27/07

Project: PO# H-805
Event: 703172
Date Sampled: NA
Date Received: NA

Analyte	Method	Date	Units	Blank
Conductivity	EPA 120.1	03/22/07	umhos/cm	< 1.00 U
Total Phosphorus	EPA 365.2	03/23/07	mg-P/L	< 0.008 U

Water Method Blank Report-KS25

STANDARD REFERENCE RESULTS-CONVENTIONALS
KS25-Friedman & Bruya, Inc.



Matrix: Water
Data Release Authorized: *[Signature]*
Reported: 03/27/07

Project: PO# H-805
Event: 703172
Date Sampled: NA
Date Received: NA

Analyte/SRM ID	Method	Date	Units	SRM	True Value	Recovery
Conductivity Ricca #3193	EPA 120.1	03/22/07	umhos/cm	965	1,000	96.5%
Total Phosphorus ERA #35064	EPA 365.2	03/23/07	mg-P/L	3.86	4.00	96.5%

Water Standard Reference Report-KS25

AKC-0007002

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Charlene Morrow, M.S.
Yelena Aravkina, M.S.
Bradley T. Benson, B.S.
Kurt Johnson, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
TEL: (206) 285-8282
FAX: (206) 283-5044
e-mail: fbi@isomedia.com

April 3, 2007



INVOICE #07ACU0403-1

Accounts Payable
Alaskan Copper Works
628 South Hanford
Seattle, WA 98134

RE: Project Boiler H2O, PO# M00053, F&BI 703172 - Results of testing requested
by Gerry Thompson for material submitted on March 20, 2007.

1 sample analyzed for pH by Method 9050A @ \$25 per sample	\$ 25.00
1 sample analyzed for Conductivity by Method 120.1 @ \$22 per sample	22.00
1 sample analyzed for Phosphorus by Method 365.2 @ \$38 per sample	<u>38.00</u>
Amount Due	\$ 85.00

FEDERAL TAX ID # (b) (6)

703172

SAMPLE CHAIN OF CUSTODY

ME 03/20/07

AIC

Send Report To SEAN Thompson
 Company ALASKAN Copper Works
 Address 628 S. Harbor St
 City, State, ZIP Seattle WA 98134
 Phone # 206-571-6033 Fax # 206-382-4309

SAMPLERS (signature)

Page # _____ of _____

PROJECT NAME/NO.

PO #

Boiler H₂O

M00053

REMARKS

TURNAROUND TIME

☐ Standard (2 Weeks)☐ RUSH

Rush charges authorized by: _____

SAMPLE DISPOSAL

☐ Dispose after 30 days☐ Return samples☐ Will call with instructions

Sample ID	Lab ID	Date	Time	Sample Type	# of containers	ANALYSES REQUESTED										Notes
						TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	HFS	PH	Alkalinity	Conductivity	Phosphate	
M00053	01	3/20/07	11:00	H ₂ O	1							X	X	X	X	

Friedman & Bruya, Inc.
 3012 16th Avenue West

Seattle, WA 98119-2029

Ph. (206) 285-8282

Fax (206) 283-5044

FORMS\COC\COC.DOC

SIGNATURE

PRINT NAME

COMPANY

DATE

TIME

Relinquished by: G. Thompson

G. Thompson

ACW

3/20/07

12:55pm

Received by: M. Tay

M. Tay

FBI

3/20/07

V

Relinquished by: _____

Received by: _____

Samples received at 24 °C

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Charlene Morrow, M.S.
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3012 16th Avenue West
Seattle, WA 98119-2029
TEL: (206) 285-8282
FAX: (206) 283-5044
e-mail: fbi@isomedia.com

April 3, 2007

Gerry Thompson, Project Manager
Alaskan Copper Works
628 South Hanford
Seattle, WA 98134

Dear Mr. Thompson:


Included are the results from the testing of material submitted on March 20, 2007 from the Boiler H2O, PO# M00053, F&BI 703172 project. There are 2 pages included in this report. Sample M00053 was sent to Analytical Resources, Inc. for alkalinity, conductivity, and phosphorous analyses. However, there was insufficient sample to perform alkalinity. Review of the enclosed report indicates that all quality assurance was acceptable.

Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures
ACU0403R